



GLENN S. USHER, M.D., M.P.H.

Afghanistan is a newly emerging nation of the free world which in recent years has accelerated the development of its resources. The government recognizes that its greatest resource is its people, and is striving to improve their health and well being.

In the spring of 1957 the Minister of Health of Afghanistan requested the International Cooperation Administration to provide consultation relative to the expansion of the country's health program with ICA's assistance. Accordingly, at ICA's request I visited Afghanistan in July and August of that year.

FROM KARACHI, Pakistan, to Kandahar, Afghanistan, the plane flies over a vast expanse of eroded hills almost devoid of human habitation. Then suddenly an oasis of irrigated fields appears below. This is Kandahar, the first stop in Afghanistan.

Kandahar gives the impression of being a city of unfinished buildings. One drives through long rows of them in various stages of construction, mute evidence of plans afoot to make Kandahar a major air terminus.

In the hospitals also there is an air of anticipated change. There are 2, 1 for men and 1

for women. While a new women's hospital is being constructed, female patients occupy the residence of a king who ruled 100 years ago. As it is a relatively new thing here for women to seek hospitalization, only a few beds for inpatients are provided in this temporary facility.

For the present, the health services of Afghanistan emphasize preventive medicine and maternal and child health activities. With the help of a physician and two nurses provided by the World Health Organization (only the two nurses remain), the Afghan provincial medical officer and his staff have organized prenatal and postnatal clinics, pediatric and well-baby clinics, mothers' demonstration classes, a domiciliary midwifery program, and

Dr. Usher is special assistant for medical activities, Communicable Disease Center, Public Health Service. At the time this paper was written, he was chief of the Program Development Branch of the Division of International Health, Public Health Service. Some of the background information for the article was compiled by Jane H. Priest, analyst in the Program Development Branch.

training courses for midwife aides. It is a well-conceived program which is gradually expanding to serve the needs of the people and to become a training center for the area.

The men's hospital is a 60-bed facility for which the provincial health officer is gradually acquiring improved equipment. Some of the new equipment has been acquired from the United Nations Children's Fund. In the outpatient department, emphasis is placed on preventive medicine, particularly venereal disease control.

Venereal disease rates of prevalence have been comparatively low in Afghanistan. Nevertheless a program to control these diseases was one of the first modern public health activities to be undertaken by the government. In Kandahar it is under the direction of an Afghan physician who received training at Johns Hopkins University under a WHO fellowship. Treatment schedules are modern, utilizing penicillin procaine with aluminum monostearate, and the control program includes case-holding activities, mass blood testing, contact tracing, and education.

Associated with the two hospitals in Kandahar is a well-equipped X-ray institute under the direction of an alert, energetic doctor. It contains equipment also for taking electrocardiograms and measuring basal metabolism.

To Kabul

From Kandahar to Kabul (pronunciation rhymes with gobble), we flew over valleys between rugged mountains. In the valleys are occasional patches of irrigated fields and a few towns. One of the towns is Ghazni, which many centuries ago was the cultural center of this part of the world. We also saw evidence of many of the underground channels which in Afghanistan are called *karez* and in Iran, *ghanats*. From the air, they look like rows of doughnuts. Each "doughnut" represents a place where the dirt from the underground channel has been brought to the surface. The *karez* are the means by which ground water from the bases of the hills and mountains is channeled with a minimum of evaporation to the fields and villages where it is used.

After the bumpy trip over the mountains,

we arrived in Kabul, which is another city undergoing the process of modernization. The most obvious evidence of this is the streets, which a few years ago were bumpy and rutted and which now the government, with Russian assistance, is paving.

Here, as in Kandahar, the air of change is reflected in the medical and public health institutions and facilities. Under the guidance of a Minister of Health who obtained his medical and public health education in American schools, and with the assistance of WHO and UNICEF, the government is emphasizing solution of the basic problems of sanitation, hygiene, and preventive medicine.

The People

The inhabitants of Afghanistan are a mixture of people of Mongolian, Aryan, and Semitic origins. The so-called "true" Afghans speak Pashto (pronounced pushtoo). The men of this group are usually tall and broad shouldered with straight noses, regular features, and rather dark complexions, although some are fair, claiming descent from the Greek legions of Alexander and the ancient tribes of Israel. The group belongs to the Pathan tribes and is dominant ethnically. One of these, the Durani tribe, numbering less than 1¼ million people, has been the ruling faction for the last 200 years.

In a broad band along the Russian border and the Oxus River are the Turkomans of Mongolotartar origin, differing from the rest of the population by their Turkish dialect, dress, and the shape of the tents used by their nomadic members. They are herdsmen and breeders of karakul sheep. South of the Turkomans, in the center of the country, are found the Hazaris, of Mongolian origin, descendants of Genghis Khan's followers. They speak Persian and related dialects.

In a small pocket in the east central area are the Uzbeks, a fair-skinned people with Mongoloid features belonging to the Turki-speaking tribes. Along the Iranian border are isolated groups of Tajeks, who are racially Persians but who resemble the "true" Afghans. They tend more to engage in industrial pursuits than do other Afghans, those living in towns forming

most of the Afghan middle and upper-middle class.

The nomadic herders, known as *Kochis*, or choochies, probably constitute about 25 percent of Afghanistan's population of 12 million. Many travel from their summer ranges along the Iranian border and the Hari River Valley to Pakistan for the cold months, often crossing the Khyber Pass at the rate of 10,000 a day at the height of the migration (1-3).

Living Conditions

Even in the cities the scarcity and high cost of lumber prohibits the use of wooden houses. Plastered mud brick, baked brick, and stone are the materials used. Many of the poorer homes have domed roofs to avoid the necessity of using wood to support a flat roof. The flat roofs are covered with sun-dried mud which sheds water quite well in a heavy rain but which in a slow rain or sleet often leaks. The better homes in the cities are rather well constructed and have tile floors, but the poorer homes usually have floors which are not impervious to water.

There is much overcrowding with consequent hazard of transmission of communicable diseases. Furthermore, in the kitchens one seldom finds the sinks, tables, and utensils which would facilitate the sanitary handling of food (1).

Water Supplies and Sanitation

Kabul and some of the larger towns have water supplies with community taps. The government is taking steps to improve these supplies and make them safer. In fact, the city of Kabul is drawing up plans for a modern water supply system. In most of Afghanistan not only agriculture but the gardens and trees in the cities and villages depend upon irrigation. The irrigation ditches are subject to pollution from many sources, and it is from these that some of the people derive their water supplies for domestic use. Also, vendors use this water to freshen their vegetables. (Another great hazard to the sanitary quality of vegetables is the use of night soil as fertilizer.)

In many of the small towns and rural areas,

well water is used. The Ministry of Health is planning a large well-drilling program to increase the availability of this source of supply and is preparing sanitarians to supervise construction and to teach sanitary maintenance of the wells.

These sanitarians will also be utilized to help improve general conditions of sanitation and hygiene, and it is expected that their effectiveness will be augmented by an aggressive health education program which the Ministry is planning.

Health Conditions

The Ministry of Health has established a health statistics section and, with the help of the World Health Organization, is taking steps to improve the collection and analysis of statistics. As things stand now, however, there is very little factual material on which to base estimates as to length of life or the prevalence of disease. Estimates of life expectancy in Afghanistan range from 20 to 40 years.

Malaria, tuberculosis, intestinal diseases, and poor nutrition are said to be the principal preventable health problems, but a nationwide malaria control program, assisted by WHO and UNICEF, is rapidly bringing malaria under control. Typhoid and paratyphoid fever and the dysenteries are endemic with epidemic outbreaks. Until recently, typhus fever epidemics occurred regularly, but now they have largely been brought under control. In 1956 there was not a single confirmed case of typhus fever in the country. Infestation with parasites is almost universal in children, and diarrheal diseases are extremely common. Trachoma and other eye disorders are prevalent, at least in some areas. The prevalence of venereal diseases, on the other hand, appears to be relatively low. Any estimate of the infant mortality rate would be little better than a guess, but it is undoubtedly well over 100 per 1,000 live births (1, 3-5).

Medical Care Facilities

Most medical institutions in this country are supported by the government, and treatment is provided free. There are 35 hospitals, 5 in

Kabul, 15 provincial, and 15 small district hospitals, with a total capacity of some 1,400 beds (1). Separate hospitals are maintained for men and for women. Under the government's 5-year plan, funds have been allocated with which to build additional hospitals and to provide better facilities and modern equipment for the existing ones. In this building program, emphasis will be placed on providing more hospital beds for women in order to bring their facilities up to a par with those for men.

Only 249 physicians have been graduated from the Faculty of Medicine since its founding in 1932. Probably not many more than 200 are practicing at the present time, and there are about 15 or 20 foreign physicians in the country.

A limiting factor in relation to medical education, as well as all other forms of higher education in Afghanistan, is the small number of students who are graduating each year from the secondary schools. However, the number is increasing year by year, and in addition just this past year the government has decided to allocate a larger number of them to the Faculty of Medicine. Whereas in recent years the number of admissions to the study of medicine has been about 35 or 40, it was expected at the time of this visit that about 100 would be admitted this year. This poses a serious problem to the Faculty in providing the facilities and instructors to teach that number of students. In its 5-year plan the government has allocated substantial sums of money to provide the facilities and to upgrade the teaching hospitals.

The training of nurses is also the responsibility of the Faculty of Medicine, and in this area too it is faced with a serious problem. Up to the present time few nurses have been trained. They are mostly male nurses. The Faculty has asked WHO for help, and a 5-year plan has been developed which calls for a rapid expansion in nurse training.

The training of midwives, on the other hand, is under the jurisdiction of the Ministry of Health. For this purpose it uses the recently upgraded maternity hospital in Kabul. Assistance in providing better equipment was given by UNICEF, and services were greatly improved with the assistance of WHO personnel, especially by Dr. Gade, a Danish woman physician who won the hearts of the Afghan

personnel with whom she worked. She established the midwifery school in a large building constructed on the grounds by the government. The school is now under the direction of a princess of the royal family.

Public Health Activities

In addition to bringing typhus fever under control, the government is making good progress in eradicating malaria and in establishing maternal and child health facilities. A start has been made on tuberculosis and venereal disease control and in the improvement of sanitation in a few limited areas of the country.

The Faculty of Medicine is expanding its training program for both male and female nurses, and the Ministry of Health is expanding its training programs in public health for physicians, public health nurses, midwives, sanitarians, laboratory personnel, and statistical personnel. The Ministry of Health, with the assistance of WHO, has recently established a school for sanitarians which is being expanded.

Public Health Institute

To develop and coordinate these various training activities the Ministry of Health is in the process of establishing an Institute of Public Health. In addition to the development and coordination of training activities the institute will administer the public health laboratory, the Ministry's health statistics activities, and a new health education department. It will establish a public health library, and it will conduct epidemiological and nutritional studies and surveys.

Out of these activities the Minister feels that there will be derived the means for more effective evaluation of public health programs and for the intelligent establishment of program priorities realistically related to disease prevalence, the socioeconomic condition of the people, and the available resources. It is an ambitious undertaking for a country in the early stages of its economic development but one which should make a substantial contribution to the effective execution of the country's public health programs.

The Helmund Valley

To go from Kabul to Lashkar Gah, we flew back to Kandahar and then traveled 90 miles west over a gravel road, one of the best in Afghanistan. Both Kandahar and Lashkar Gah are in an area which in recent geologic time was probably part of a vast lake without an outlet. The area still has no outlet for the streams and rivers which flow into and through it. They flow into a great salty depression in the southwest portion of the area and there the water which does not sink into the ground evaporates.

Lashkar Gah, a new city located on the Helmund River, is the headquarters of a large irrigation and land development project administered by the Helmund Valley Authority, which is similar in some respects to the Tennessee Valley Authority. The project is being used for the settlement of large numbers of people from the nomadic tribes.

Lashkar Gah is being built for the specific purpose of providing headquarters for HVA and for the government of Girishk Province. It is expected that the provincial government will be moved there soon. The city derives its name from a city which was once a flourishing military cantonment in an ancient Afghan empire, but which is marked today only by hulking ruins nearby. In the neighborhood are also ruins of a castle which was 8 stories high and covered some 2 or 3 acres of ground.

The city is being built according to plan, with well laid-out streets, well designed and constructed houses, a good water supply, and a sewage-disposal system. The foundations are being laid for a 30-bed demonstration health center and training school for health personnel, which will be modern in design and equipment. With the assistance of the International Cooperation Administration, the health center will be the central facility for a network of subsidiary health centers in Girishk Province, which forms the major part of the area under the jurisdiction of HVA. It is planned that from these health centers not only the new settlers but the old inhabitants of the area also will receive the benefits of modern medicine and

public health and the present-day teachings of hygiene and sanitation (2, 3).

Summary

Substantial progress has been made in establishing the medical and public health institutions and organizations needed in Afghanistan. Training of essential personnel is necessarily slow because of the scarcity of people with the prerequisite educational qualifications, but this problem is being alleviated as the educational system expands.

Progress is being made also in combating some of the country's most serious preventable diseases, notably malaria and typhus fever, and in developing maternal and child health activities, but much remains to be done in the entire field of public health and sanitation. Implementation of the plans of the Ministry of Health for the development of its new Institute of Public Health should contribute materially to the improvement of health facilities and programs.

Another interesting development which is planned for the near future is the establishment of a public health program in the Helmund Valley which will provide health services for nomads who are being settled on newly irrigated land and will at the same time provide a demonstration of the application of public health methods and an area for the training of public health personnel.

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